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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,709	02/09/2004	Sayaka Kawashima	TJK/449	9547

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EXAMINER	
FERGUSON, LAWRENCE D	
ART UNIT	**PAPER NUMBER**
1774	

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/774,709	KAWASHIMA ET AL.	
	Examiner	Art Unit	
	Lawrence D. Ferguson	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Objections

1. The abstract of the disclosure is objected to because the abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc. Applicant's Abstract contains more than 1 paragraph and has exceeds more than 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections – 35 USC 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-3 and 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2 and 5, the phrase, "the dense layer formed on the water repellent layer and the water repellent layer formed on the dense layer" is indefinite. It is unclear how many dense and water repellent layers are present and the exact order they are arranged in.

In claims 3 and 6, the phrase, "the water repellent layer formed on the dense layer, and the dense layer formed on the water repellent layer" is indefinite. It is unclear

how many dense and water repellent layers are present and the exact order they are arranged in.

Claim Rejections – 35 USC § 103(a)

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-12 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petrmichl et al. (U.S. 5,888,593).

Petrmichl discloses a barrier film comprising at least two silicon oxide carbide layers (dense and water repellent layers) (column 5, lines 26-35 and column 13, lines 24-44) having abrasion resistant coating on the substrate (column 4, lines 59-64) where the protective coating provides a barrier to moisture, oxygen and other environmental elements, which utilizes plasma treatment process (column 3, lines 25-32). The coatings may be composed of multiple layers including a thin adhesion layer (column 5, lines 66-67). Petrmichl further discloses the barrier film can be used for scanner windows and industrial wear parts (an image display medium or container). Because Petrmichl has a barrier film with equivalent materials as the claimed invention, it would have been obvious to one of ordinary skill in the art to include the optimum thickness and atomic percentage of Si, O and C of the barrier layer(s). Such features are properties which can be easily determined by one of ordinary skill in the art. With regard

to the limitation of the thickness and atomic percentage, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. thickness and atomic percentage) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are optimizable as they directly affect the flexibility and durability of the film. It would have been obvious to one of ordinary skill in the art to make the barrier film with the limitations of the thickness and atomic percentage since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 USPQ 215 (CCPA 1980). In claims 10 and 15, the phrases, "plastic treatment process is applied to the uppermost surface of the barrier layer" and "produced by thermally fusing the heat sealable resin layer into a bag or box" respectively, introduces process limitations to the product claims. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966. Further, process limitations are given no patentable weight in product claims. In claim 14, the phrase, "heat sealable" constitutes a 'capable of' limitation and that such a recitation that an element is 'capable of' performing a function is not a positive limitation but only requires the ability to so perform.

Claim Rejections – 35 USC § 103(a)

6. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petrmichl et al. (U.S. 5,888,593) in view of Thomas et al (WO 93/24243).

Petrmichl is relied upon for instant claim 1. Petrmichl does not explicitly disclose the oxygen transmission rate or water vapor transmission rate. Thomas teaches a gas barrier film (abstract) having a silicon oxide film formed by a plasma method (page 4, lines 10-37, page 14, lines 7-20 and page 20, lines 1-10), wherein oxygen transmission rate is 0.4 cc/m2/day or less and water vapor transmission rate is 0.4 cc/m2/day or less (page 19, lines 1-13), wherein a heat sealable resin layer is provided on the surface of at least one side of the gas barrier film (page 20, lines 11-34, since polyethylene terephthalate, polypropylene, polyethylene and polyvinylchloride are heat sealable resins (page 20, lines 1-34). Petrmichl and Thomas are both directed to barrier films. Therefore, it would have been obvious to one of ordinary skill in the art for the OTR and WVTR to have a transmission rate of 0.4 cc/m2/day or less, as taught in Thomas for the barrier layer of Petrmichl's transmission rate for an improved permeation of carbon dioxide (page 19, lines 1-10).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is 571-

272-1522. The examiner can normally be reached on Monday through Friday 9:00 AM – 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

L. Ferguson
Patent Examiner
AU 1774

RENA DYE
SUPERVISORY PATENT EXAMINER
A.U. 1774 4/19/06